

Claims

What is claimed is:

1. A dispensing device comprising:

5 (A) a client computer usable storage medium located in a client computer of said device, and a host computer usable storage medium located in a host computer in communication with said client computer;

(B) one or more reservoirs containing dispensable compositions, said reservoirs being positioned in said device and having identification tags affixed thereto;

10 (C) means for dispensing one or more said dispensable compositions through one or more dispensing heads, said means for dispensing being in communication with said client and said host computer;

(D) means for reading current dispensable composition information of said dispensable compositions disposed on said identification tags;

(E) means for writing updated dispensable composition information of said dispensable compositions to said identification tags; and

20 (F) computer readable program code means for dispensing one or more said dispensable compositions, said code means residing in said client computer usable storage and said host computer usable storage media, wherein said computer readable program code means comprise:

25 (F1) means for configuring computer readable program code devices to cause said means for reading to read said current dispensable composition information and to store said current information on said host computer, or on said client computer and said host computer;

(F2) means for configuring computer readable program code devices to cause said means for dispensing to terminate dispensing said dispensable compositions if said current information does not match with a stored dispensable composition information of said dispensable compositions stored on said host computer, or on said client computer and said host computer;

30 (F3) means for configuring computer readable program code devices to cause said means for dispensing to dispense said dispensable compositions in accordance with a dispensing program if said current information matches with said stored dispensable composition information;

35 (F4) means for configuring computer readable program code devices to cause said client computer or said host computer to generate

said updated dispensable composition information of said dispensable compositions; and

(F5) means for configuring computer readable program code devices to cause said means for writing to write said updated dispensable composition information to said identification tags and to store said
 5 updated information on said host computer, or on said client computer and said host computer.

2. The device of claim 1 wherein said reservoirs are positioned in one or more racks of said device.

10 3. The device of claim 1 wherein said reservoir is a disposable bag nested in a receptacle located in said dispensing device.

4. The device of claim 1 wherein said identification tag is a RFID tag.

15 5. The device of claim 1 wherein one or more identification tag interrogators comprise said means for reading and said means for writing.

6. The device of claim 1 or 5 wherein said identification tag is a passive or active RFID tag.

7. The device of claim 6 wherein said passive or said active RFID tag is disposed on an insulated substrate.

20 8. The device of claim 1 wherein said dispensable composition is an ink jet ink, electrically conductive ink, or biomaterial.

9. The device of claim 1 wherein in said step (C1) said dispensing composition is dispensed on a target substrate.

25 10. The device of claim 9 wherein said target substrate is a cellulose paper, polymeric film, woven fabric, non-woven fabric, biologically active substrate or a circuit board.

30 11. The device of claim 1 wherein said means (F2) comprise means for configuring computer readable program code devices to cause said client computer or said host computer to determine amount of the dispensable compositions remaining in one or more said reservoirs.

35 12. The device of claim 1 wherein said means (F4) comprise means for configuring computer readable program code devices to cause said client computer or said host computer to deduct dispensed quantities of one or more said dispensable compositions from current quantities registered in said current dispensable composition information to arrive at updated quantities of one or more said dispensable compositions registered in said updated dispensable composition information.

13. The device of claim 1 wherein said dispensing head is a print head.

14. A portable computer usable storage medium having said computer readable program code means of claim 1 stored therein.

5 15. The portable computer usable storage medium of claim 14 wherein said medium is a CD-Rom.